CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/CK/W.No.12/2022-23

Date : 25.05.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Sri. Chikkaboregowda Karigowda (CKG Constructions Private Limited),** Contractor, Mysore.
Name of Work	De-setting and Re-setting of Drain and Re-Asphalting of roads to Chikkasandra area in Ward No.12 Shettyhalli Sub Division, BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	25.05.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.20	11.60	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.90	13.20	
	Combined Flakiness & Elongation index	24.10	24.80	

Note:

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No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
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DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Sri. Chikkaboregowda Karigowda (CKG Constructions Private Limited),** Contractor, Mysore.
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Date : 25.05.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Sri. Chikkaboregowda Karigowda (CKG Constructions Private Limited),** Contractor, Mysore.

Name of Work : De-setting and Re-setting of Drain and Re-Asphalting of roads to Chikkasandra area in Ward No.12 Shettyhalli Sub Division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 23.05.2022 to 25.05.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	20.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Date of Testing : 23.05.2022 to 25.05.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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IS Code: : IS 2720(Part 5):1985

Date of Testing : 25.05.2022 to 27.05.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
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Job No.: CACE/BBMP/CK/W.No.12/2022-23

Date: 13.06.2022

Aggregate Gradation Test

Client	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Sri. Chikkaboregowda Karigowda (CKG Constructions Private Limited),** Contractor, Mysore.
Name of the work	De-setting and Re-setting of Drain and Re-Asphalting of roads to Chikkasandra area in Ward No.12 Shettyhalli Sub Division, BBMP, Bangalore.
Sample ID	Hotmix Plant, Bangalore.
IS Code:	IS 2386 (Part 1):1963(RA 2002)
Type of Mix	Bituminous Macadam
Date of Testing	13.06.2022

5000 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Specification as per MORTH 5th edition table 500-7	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH 5th edition
19	362	7.24	7.24	92.76	90-100	
13.2	1856	37.12	44.36	55.64	56-88	
4.75	1730	34.60	78.96	21.04	16-36	
2.36	665	13.30	92.26	7.74	4-19	
0.3	159	3.18	95.44	4.56	2-10	
0.075	89	1.78	97.22	2.78	0-8	

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Specification as per MORTH 5th edition table 500-7	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH 5th edition
19	389	7.78	7.78	92.22	90-100	
13.2	1530	30.60	38.38	61.62	56-88	
4.75	1526	30.52	68.90	31.10	16-36	
2.36	689	13.78	82.68	17.32	4-19	
0.3	580	11.60	94.28	5.72	2-10	
0.075	112	2.24	96.52	3.48	0-8	

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Job No.: CACE/BBMP/CK/W.No.12/2022-23 Date : 13.06.2022

Aggregate Impact Value

Client	**Assistant Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Sri. Chikkaboregowda Karigowda (CKG Constructions Private Limited),** Contractor, Mysore.
Name of the Work	De-setting and Re-setting of Drain and Re-Asphalting of roads to Chikkasandra area in Ward No.12 Shettyhalli Sub Division, BBMP, Bangalore.
Source / Location	Hot mix Plant, Bangalore
IS Code	IS 2386 (Part 4):1963(RA 2011)
Type of Mix	Bituminous Macadam
Date of Testing	13.06.2022

Sl No.	Details	Test No. 1	Test No. 4	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	381	383	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	85	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	296	296	
4	Aggregate Impact value = percent fines	22.31	22.72	
	100* (W_2/W_1)%			**22.51**

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30% (Specification as per MORTH 5th edition table no 500.6)

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